

November 5, 2001

Agricultural Marketing Service

Transportation and Marketing Programs

Marketing and Transportation Analysis

# GRAIN TRANSPORTATION PROSPECTS



The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

# GRAIN TRANSPORTATION PROSPECTS

<b>Summary</b>	<b>3</b>
<b>Grain Market Situation</b>	
<b>Grain and Soybeans</b>	<b>4</b>
<b>Wheat</b>	<b>6</b>
<b>Corn</b>	<b>8</b>
<b>Soybeans</b>	<b>10</b>
<b>Transportation Situation</b>	
<b>Ocean Freight</b>	<b>13</b>
<b>Middle East</b>	<b>15</b>
<b>Barge</b>	<b>16</b>
<b>Rail</b>	<b>19</b>
<b>Western Railroads</b>	<b>20</b>
<b>Eastern Railroads</b>	<b>23</b>
<b>Motor Carrier</b>	<b>27</b>
<b>Fuel Prices</b>	<b>27</b>
<b>Midwest Prices</b>	<b>29</b>

This report was prepared by the Agricultural Marketing Service's (AMS) Marketing and Transportation Analysis Prospects Team, Karla Martin, Managing Editor, (202) 720-8264. Team members are:

Karla Martin, Agricultural Economist <a href="mailto:Karla.martin@usda.gov">Karla.martin@usda.gov</a> (202) 720-8264	Managing Editor and Grain Market Situation
Surajudeen Olowolayemo, Agricultural Economist <a href="mailto:Surajudeen.olowolayemo@usda.gov">Surajudeen.olowolayemo@usda.gov</a> (202) 690-1328	Grain Market Situation
Hooshang Fazel, Agricultural Economist <a href="mailto:Hooshang.fazel@usda.gov">Hooshang.fazel@usda.gov</a> (202) 690-4440	Ocean Freight Transportation Situation
Nick Marathon, Economist <a href="mailto:Nick.marathon@usda.gov">Nick.marathon@usda.gov</a> (202) 690-0331	Barge Transportation Situation
Marvin Prater, Agricultural Economist, <a href="mailto:Marvin.prater@usda.gov">Marvin.prater@usda.gov</a> (202) 690-6290	Rail Transportation Situation
James Del Ciello, Agricultural Marketing Specialist <a href="mailto:James.delciello@usda.gov">James.delciello@usda.gov</a> (202) 720-1378	Motor Carrier Transportation Situation

**Published** by AMS-USDA. Current and back issues are available on the Internet at [http://www.ams.usda.gov/tmd/mta/mta\\_special\\_reports.htm](http://www.ams.usda.gov/tmd/mta/mta_special_reports.htm).

**Approved** by the U.S. Department of Agriculture's (USDA) World Agricultural Outlook Board (WAOB).

**The Next Issue** is scheduled for Internet release on February 4, 2002.

**Cover Photo:** Taken by Jim Caron, August 2001, Grain Elevators, Trucks, Railroad Yard, North Dakota. \*Special Thanks to Paula Collins, Writer-Editor, AMS, Transportation and Marketing Programs, and Gail Wade, National Agricultural Statistics Service.

## Summary

The October production forecast for U.S. grain (corn, sorghum, barley, oats, wheat, and rye) and soybean production is approximately 15.2 billion bushels for 2001/02, down 4 percent from the 2000/01 marketing year. With beginning stocks up 1 percent, total supply for U.S. grain and soybeans is projected at 18.7 billion bushels, 3 percent lower than in 2000/01. September 1 grain and soybean stocks in all positions are projected at 4.71 billion bushels, down 3 percent from last year and 13 percent below the 5-year average. Of the total stocks, 63 percent were reported as off-farm stocks. The Eastern and Western Corn Belts contributed 1.98 billion bushels of total stocks stored, 42 percent of the U.S. total.

The production estimate for all classes of wheat for the 2001/02 wheat crop is 1.96 billion bushels, down approximately 275 million bushels or 12 percent from 2000/01. With imports projected at 90 million bushels, the total supplies are projected at 2.92 billion bushels, down 348 million bushels or 11 percent, compared to 2000/01. Wheat stored in all positions on September 1, 2001, is 2.16 billion bushels, down 8 percent from a year ago but 2 percent above the 5-year average.

The U.S. corn crop for 2001/02 is forecast at 9.4 billion bushels, down 538 million bushels or 5 percent from the previous year. With beginning stocks up 1.9 billion bushels, total supplies for 2001/02 are projected at 11.3 billion bushels, down 355 million bushels or 3 percent from the 2000/01 marketing year.

This year's soybean crop is projected at 2.91 billion bushels, up 149 million bushels or 5 percent from 2000/01. With beginning stocks at 248 million bushels, the total supplies for 2001/02 are projected at 3.16 billion bushels, up 106 million bushels or 3 percent from last year's level.

Third quarter average ocean freight rates for both the U.S. Gulf (Gulf) and the Pacific Northwest (PNW) were at their lowest so far this year. For the third quarter of 2001, the average Gulf ocean freight rate was \$18.79 per metric ton, the lowest in 10 years, except for 1998. This quarter's average rate for the Gulf (with the exception of 1998) was its lowest in more than 10 years. For the PNW, the average ocean freight rate of \$11.50 per metric ton is also lower than the 5-, 10-, and 15-year averages.

For the third quarter of 2001, Minneapolis-St. Paul to New Orleans barge freight rates were reported at 217 percent of tariff, which was about the same as the 5-year average. The tariff rate from Minneapolis-St. Paul is \$6.19 per ton; therefore, the spot market rate quoted is 2.17 times \$6.19 or \$13.43 per ton. The upper Mississippi River (UMR) flooding caused barge companies to forgo shipments at the beginning of the navigation season, when rates are typically high. With the end of the UMR barge season rapidly approaching, barge companies are unlikely to expect any rate increases to recoup revenues lost earlier in the season. Barge freight rates for grain shipped from St. Louis to New Orleans for the third quarter of 2001 averaged 159 percent of tariff (\$6.34 per ton based upon a \$3.99 tariff), which was about the same as the 5-year average.

Rail capacity for agricultural products will be adequate for this fall and winter. The fall demand for rail transportation historically peaks in October. To date, U.S. railroads have been able to fill nearly all car orders either on time or within a few days. Although none of the railroads, with the exception of Burlington Northern Santa Fe, report covered-hopper railcars in storage, most expect to begin placing railcars in storage during November. The availability of power and crews has also been adequate.

Motor carrier grain transportation has changed little in the wake of the September 11 terrorist attacks. These events should not substantially change ongoing grain haul capacities. However, grain haul prospects are complicated by uncertainties that depend upon various motor fuel resources. These include fuel prices, the risk of supply losses in reaction to ongoing allied military actions, the possible action of the Organization of the Petroleum Exporting Countries to trim production quotas, and slack demand for crude oil in response to sustained low oil prices.

## Grain Market Situation

### Grain and Soybeans

**Supplies.** The forecast for U.S. grain (corn, sorghum, barley, oats, wheat, and rye) and soybean production is approximately 15.2 billion bushels for 2001/02, down 4 percent from a year earlier. Imports are down 7 percent from a year earlier. Total supply for U.S. grain and soybeans is projected at 18.7 billion bushels, 3 percent lower than in 2000/01.

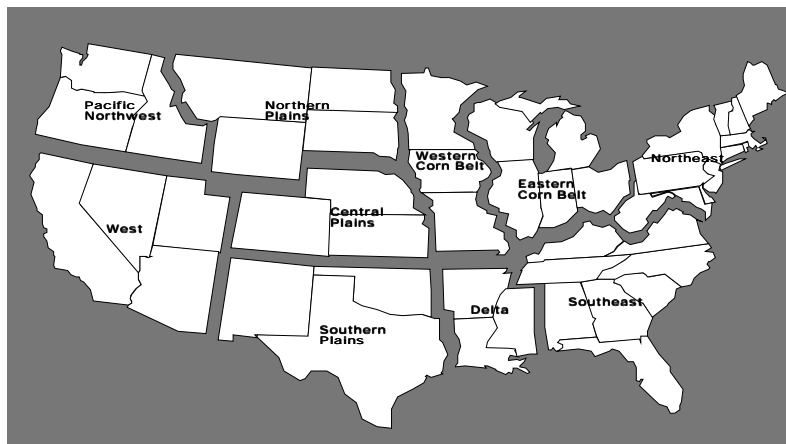
The Eastern and Western Corn Belt regions, along with the Central and Northern Plains, account for 83 percent of the total grain and soybean production in the United States, approximately 32, 25, 18, and 9 percent, respectively. The Eastern and Western Corn Belts, together, account for 8.64 billion bushels of the forecast grain and soybean produced in the United States, 57 percent of the total production for 2001/02. In the Eastern Corn Belt, production was 4.79 billion bushels, down 2 percent from the previous year but up 6 percent, compared to the 5-year average. Production in the Western Corn Belt was down 9 percent at 3.85 billion bushels and 6 percent lower than the 5-year average. Forecast production in the Central Plains has increased by 7 percent, the only significant increase in all of the regions. This 173-million-bushel increase is also a 5-percent decrease from the 5-year average (figure 1, table 1).

**Use.** Total use is 16 billion bushels, projected down slightly, with approximately 89 million bushels less than last year. Domestic use is 11.7 billion bushels, which more than offsets a 2-percent increase in total use and an increase in exports of 4.3 billion bushels. Exports have increased by 91 million bushels, a 2-percent increase from last year. Ending stocks for the 2001/02 marketing year are projected at 2.65 billion bushels, down 18 percent from a year earlier.

**Stocks and Storage.** September 1 grain and soybean stocks in all positions are at 4.71 billion bushels, down 3 percent from last year but 13 percent above the 5-year average. Of the total stocks, 63 percent were reported as off-farm stocks. Total stocks were up in three of the ten producing regions (table 2), with the Southern Plains having increased the most by 12 percent since last year. The Eastern and Western Corn Belts contributed 1.98 billion bushels of total stocks stored, 42 percent of the U.S. total.

As of September 1, 24 percent of total U.S. grain storage capacity, as reported December 1, 2000, was in use. Of the total, 15 percent of the on-farm and 35 percent of the off-farm capacity was in use. The highest utilization rates were in the Pacific Northwest (PNW) and Northern Plains, where 50 and 37 percent, respectively, of all storage capacity was in use (table 3). Small grains, such as wheat and barley, make up a large share of these regions' total grain production. In addition, the 2001 small grains crops were largely harvested by September 1.

**Figure 1--U.S. grain production regions**



Source: USDA-AMS

**Table 1--U.S. grain<sup>1</sup> and soybean production, 1996/97-2001/02**

Region	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	Percent of 2000/01	Percent of 5-yr. avg.
	<i>Million bushels</i>							
Northeast	394	341	361	275	404	350	87	99
Southeast	770	703	584	565	692	693	100	105
Delta	475	403	338	353	350	375	107	98
Eastern Corn Belt	4,034	4,493	4,605	4,530	4,871	4,794	98	106
Western Corn Belt	3,981	3,934	4,260	4,097	4,249	3,846	91	94
Southern Plains	649	828	717	804	675	629	93	86
Central Plains	2,767	2,898	3,087	2,945	2,532	2,705	107	95
Northern Plains	1,522	1,325	1,551	1,338	1,512	1,310	87	90
Pacific Northwest	497	478	459	390	449	342	76	75
West	150	143	136	120	113	97	86	74
Other States <sup>2</sup>	n/a	n/a	n/a	n/a	61	60	n/a	n/a
United States	15,240	15,546	16,097	15,416	15,905	15,203	96	97

<sup>1</sup>U.S. grains include corn, sorghum, barley, oats, wheat, and rye.

<sup>2</sup>Other States include: Alabama, Arizona, California, Delaware, Florida, Georgia, Idaho, Illinois, Kansas, Kentucky, Maryland, Minnesota, Mississippi, Missouri, Montana, Nebraska, North Carolina, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin, and Wyoming.

Source: USDA-NASS

**Table 2--U.S. grain and soybean stocks by position, September 1, 1995-2001**

Region	1995			1996			1997		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>			<i>million bushels</i>			<i>million bushels</i>		
Northeast	24	43	67	12	23	36	22	37	60
Southeast	15	74	89	6	48	54	12	58	70
Delta	1	40	42	1	37	38	1	38	39
Eastern Corn Belt	284	513	797	131	223	355	187	290	477
Western Corn Belt	475	603	1,077	226	211	437	310	311	621
Southern Plains	22	155	178	20	117	136	24	213	237
Central Plains	217	500	717	119	291	410	221	508	729
Northern Plains	672	185	856	675	177	852	636	195	831
Pacific Northwest	121	227	348	111	244	355	131	259	390
West	7	34	41	8	29	37	6	39	45
Unallocated	75	51	126	62	27	89	79	43	122
United States	1,914	2,424	4,338	1,371	1,426	2,798	1,630	1,991	3,621

Region	1998			1999			2000		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>			<i>million bushels</i>			<i>million bushels</i>		
Northeast	16	41	57	18	47	65	18	50	68
Southeast	15	64	79	10	73	84	10	74	85
Delta	1	60	61	1	49	50	1	56	56
Eastern Corn Belt	244	472	716	299	586	885	279	600	879
Western Corn Belt	421	396	817	492	642	1,135	539	580	1,118
Southern Plains	26	303	330	26	318	344	24	277	302
Central Plains	235	620	855	291	734	1,025	232	698	929
Northern Plains	710	191	901	712	204	916	636	212	848
Pacific Northwest	129	270	399	121	242	363	121	273	394
West	3	47	50	2	47	49	2	35	37
Unallocated	127	37	165	134	39	174	117	36	153
United States	1,928	2,502	4,430	2,106	2,983	5,089	1,979	2,891	4,861

Region	2001			Percent of 2000			Percent of 5-yr. avg.		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>								
Northeast	23	46	69	124	92	100	131	115	120
Southeast	10	75	85	96	100	100	93	117	114
Delta	1	58	58	102	104	104	83	120	120
Eastern Corn Belt	245	609	854	88	101	97	107	140	129
Western Corn Belt	475	646	1,121	88	111	100	119	151	136
Southern Plains	18	320	338	75	115	112	76	130	125
Central Plains	198	710	908	85	102	98	90	125	115
Northern Plains	571	209	780	90	99	92	85	107	90
Pacific Northwest	107	209	317	89	77	80	88	81	83
West	2	38	40	74	109	107	37	97	92
Unallocated	103	33	136	88	91	89	99	90	97
United States	1,752	2,953	4,705	89	102	97	97	125	113

Source: USDA-NASS

**Table 3--U.S. grain storage capacity utilization, September 1, 1996-2001**

Region	1996			1997			1998		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	percent			percent			percent		
Northeast	5	16	9	10	25	16	7	28	15
Southeast	1	14	6	2	17	8	3	19	9
Delta	1	10	7	0	11	7	0	17	11
Eastern Corn Belt	4	11	7	6	14	10	8	23	14
Western Corn Belt	7	12	9	10	18	13	13	23	17
Southern Plains	8	11	10	10	22	20	12	35	30
Central Plains	7	18	13	14	34	23	15	42	28
Northern Plains	42	40	42	40	44	41	45	43	45
Pacific Northwest	41	64	54	52	67	61	53	70	63
West	0	21	26	0	28	32	0	34	36
United States	12	17	14	15	25	19	18	31	23

Region	1999			2000			2001		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	percent			percent			percent		
Northeast	8	33	17	8	34	18	10	31	7
Southeast	2	20	9	2	23	10	2	23	4
Delta	0	13	9	0	15	10	0	15	4
Eastern Corn Belt	10	28	17	9	28	17	8	28	15
Western Corn Belt	16	37	23	17	34	23	14	37	22
Southern Plains	12	38	33	11	33	29	8	37	28
Central Plains	18	48	32	14	45	29	12	42	27
Northern Plains	45	45	45	39	46	40	35	45	37
Pacific Northwest	49	63	58	49	72	63	44	55	50
West	0	34	36	0	24	25	0	25	16
United States	19	37	27	18	36	25	15	35	24

Note: Based on storage capacity as reported in December of the preceding year.  
Source: USDA-NASS

## Wheat

**Supplies.** The production estimate for all classes of wheat for the 2001/02 crop is 1.96 billion bushels, down 274 million bushels or 12 percent from 2000/01. With beginning stocks at 876 million bushels, the total supplies are projected at 2.92 billion bushels, down 348 million bushels or 11 percent, compared to 2000/01.

The Central and Northern Plains, together, account for 925 million bushels or 47 percent of total U.S. wheat production for 2001/02. In the Central Plains, production has steadily decreased since 1998/99 from 681 million bushels to its current 456 million bushels, a 225-million-bushel decrease over 3 years or 33 percent. All other regions ranged from 5 to 23 percent lower than last year's production levels. The only region with increased production was the Southern Plains with an increase of 26 million bushels from last year or 12 percent (table 4).

**Table 4--U.S. wheat production, 1996/97-2001/02**

Region	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	Percent of 2000/01	Percent of 5-yr. avg.
	<i>million bushels</i>							
Northeast	34	39	34	37	37	31	83	86
Southeast	117	125	101	110	111	94	85	83
Delta	84	51	57	65	82	70	85	104
Eastern Corn Belt	150	212	206	215	212	176	83	88
Western Corn Belt	157	137	139	125	147	122	83	86
Southern Plains	173	298	343	284	213	239	112	91
Central Plains	404	662	681	621	479	456	95	80
Northern Plains	715	556	604	524	571	469	82	79
Pacific Northwest	367	339	317	263	327	251	77	78
West	77	61	64	56	54	50	92	80
United States	2,277	2,481	2,547	2,299	2,232	1,958	88	2,368

Source: USDA-NASS

**Use.** Total wheat use for 2001/02 is projected at 2.27 billion bushels, down 124 million bushels or 5 percent from 2000/01. Domestic use is projected at 1.25 billion bushels, down 87 million bushels or approximately 7 percent below 2000/01. Exports are projected at 1.03 billion bushels, down 36 million bushels from the previous year. Ending stocks for the 2001/02 marketing year are projected at 652 million bushels, down 26 percent from the previous year's level.

**Stocks and Storage.** Wheat stored in all positions on September 1 totaled 2.16 billion bushels, down 8 percent from a year earlier and 2 percent below the 5-year average (table 5). On-farm stocks, estimated at 697 million bushels, were down 14 percent from the previous year and 17 percent below the 5-year average. Off-farm stocks, estimated at 1.46 billion bushels, were down 6 percent from a year ago but 8 percent above the 5-year average.

Sixty-three percent of the Nation's total wheat stock was in the Plains regions, with the Central Plains accounting for 25 percent, followed by the Northern Plains with 24 percent and the Southern Plains with 14 percent. The Central Plains had 83 percent of its total stocks in off-farm facilities. Wheat stored in the Central Plains was 3 percent below the 2000/01 level but 6 percent above the 5-year average. The Northern Plains experienced the largest absolute reduction in total stocks of 65 million bushels or 11 percent, 74 percent of which was on farms. While total stocks fell in all States in the Northern Plains, 58 percent of the region's stocks were in Ohio. Southern Plains stocks increased by 22 million bushels or 8 percent to 300 million bushels. This is also 20 percent above the 5-year average. The majority of the stocks in the Southern Plains were located off farms.

**Table 5--U.S. wheat stocks by position, September 1, 1995-2001**

Region	1995			1996			1997		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	million bushels			million bushels			million bushels		
Northeast	0	29	29	0	16	16	0	26	26
Southeast	3	47	49	2	32	34	3	39	42
Delta	1	29	29	1	28	29	1	31	32
Eastern Corn Belt	12	166	179	11	79	90	23	144	167
Western Corn Belt	65	64	129	94	50	144	73	62	135
Southern Plains	16	130	146	18	108	126	21	198	220
Central Plains	86	320	406	83	222	305	112	384	496
Northern Plains	455	127	582	501	127	628	436	132	568
Pacific Northwest	76	198	274	84	208	292	90	214	304
West	2	23	25	4	21	25	2	31	33
Unallocated	28	4	32	27	6	33	35	20	55
United States	744	1,137	1,881	825	900	1,724	794	1,282	2,076

Region	1998			1999			2000		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	million bushels			million bushels			million bushels		
Northeast	0	28	28	0	33	33	0	36	36
Southeast	4	38	42	3	47	50	3	53	56
Delta	1	42	43	1	34	35	1	48	48
Eastern Corn Belt	26	186	212	23	219	242	27	215	241
Western Corn Belt	71	79	150	73	85	157	87	84	171
Southern Plains	26	286	312	26	287	313	24	254	278
Central Plains	123	433	556	128	472	600	93	453	546
Northern Plains	501	132	633	520	133	653	445	144	589
Pacific Northwest	93	224	317	85	197	282	88	223	311
West	3	37	40	2	37	39	2	28	30
Unallocated	39	15	53	40	12	52	39	8	47
United States	886	1,500	2,385	888	1,557	2,445	808	1,544	2,353

Region	2001			Percent of 2000			Percent of 5-yr. avg.		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	million bushels								
Northeast	0	32	0	0	89	0	0	114	0
Southeast	2	46	11	67	87	20	70	110	25
Delta	1	45	25	102	95	51	96	123	66
Eastern Corn Belt	14	194	178	54	91	74	66	115	93
Western Corn Belt	76	74	149	88	88	87	95	103	98
Southern Plains	18	286	300	75	113	108	79	126	120
Central Plains	89	442	531	96	98	97	83	113	106
Northern Plains	391	135	524	88	94	89	82	101	86
Pacific Northwest	77	170	247	88	76	79	88	80	82
West	2	29	26	74	104	87	63	93	77
Unallocated	27	6	165	69	72	348	75	48	342
United States	697	1,459	2,155	86	94	92	83	108	98

Source: USDA-NASS

## Corn

**Supplies.** The production forecast for the 2001/02 corn crop is 9.43 billion bushels, down 538 million bushels or 5 percent from the previous year (table 6). Beginning stocks are projected up 1.9 billion bushels. Total supplies for 2001/02 are projected at 11.3 billion bushels, down 355 million bushels or 3 percent from the 2000/01 marketing year.

The Eastern and Western Corn Belts are the two largest corn-producing regions, accounting for 66 percent of total production, 37 and 29 percent, respectively. Production is forecast down 93 million bushels to 3.48 billion bushels in the Eastern Corn Belt. This is 3 percent below the previous year but 6 percent above the 5-year average. Production is forecast down 322 million bushels to 2.77 billion bushels in the Western Corn Belt. This is 10 and 7 percent, respectively, below the previous year and 5-year average for the region. Production is forecast down 157.2, 118.5, and 104.1 million bushels (16, 7, and 13 percent), respectively, in Minnesota, Iowa, and Indiana. These three States comprise 35 percent of all U.S. corn production.

**Table 6--U.S. corn production, 1996/97-2001/02**

Region	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	Percent of 2000/01	Percent of 5-yr. avg.
	<i>million bushels</i>							
Northeast	295	232	254	172	282	239	85	97
Southeast	461	395	324	330	412	422	103	110
Delta	155	118	108	89	104	112	107	97
Eastern Corn Belt	2,994	3,260	3,336	3,304	3,577	3,484	97	106
Western Corn Belt	2,920	2,793	3,087	2,996	3,093	2,771	90	93
Southern Plains	238	280	228	284	285	203	71	77
Central Plains	1,663	1,650	1,814	1,733	1,580	1,650	104	98
Northern Plains	428	394	528	452	535	467	87	100
Pacific Northwest	34	30	33	32	19	11	61	39
West	45	55	48	40	40	31	79	69
Other States <sup>1</sup>					41	38	n/a	n/a
United States	9,233	9,207	9,759	9,431	9,968	9,430	95	99

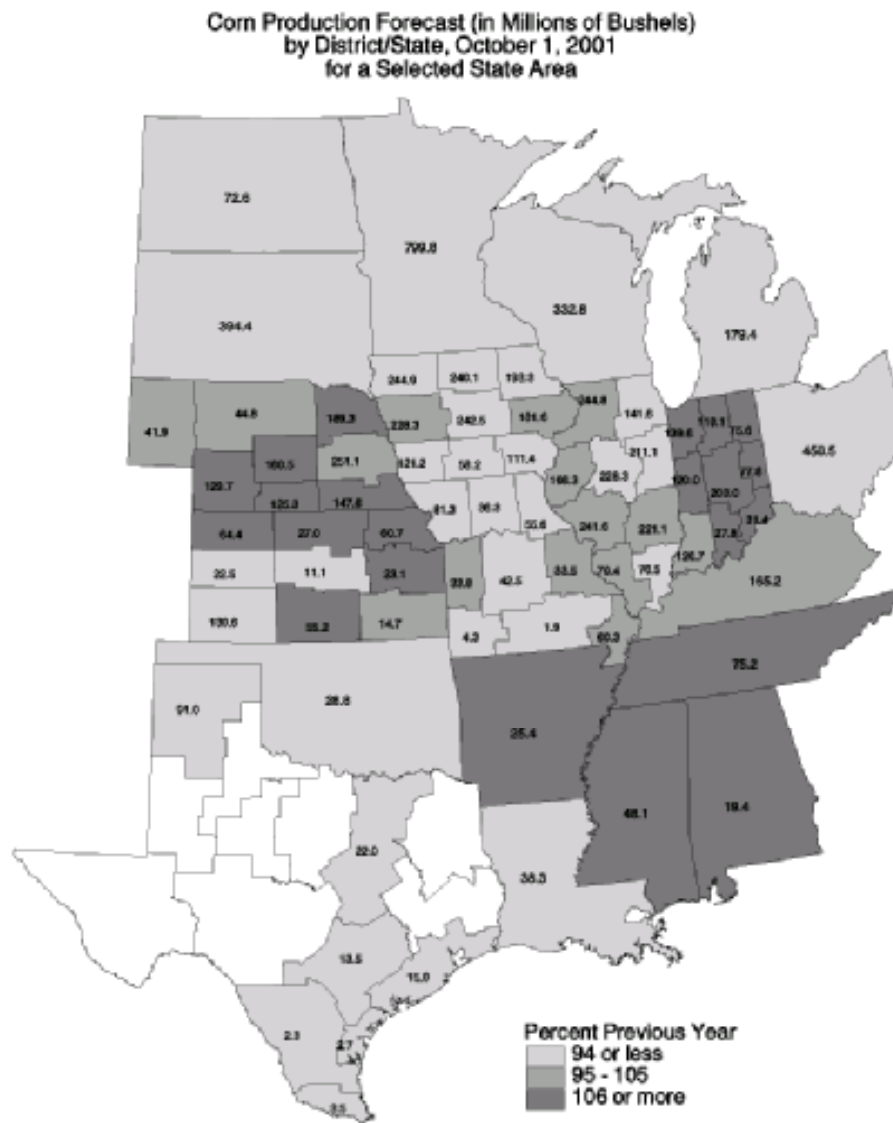
<sup>1</sup>Other States include: Arizona, Florida, Idaho, Montana, Oregon, Utah, West Virginia, and Wyoming.  
Source: USDA-NASS

**Use.** Total corn use for 2001/02 is at 9.9 billion bushels, up 86 million bushels or 1 percent from last year. Domestic use is projected at 7.83 billion bushels, down 24 million bushels from the previous year. As reduced feeding more than offsets larger industrial use, exports are projected at 2.05 billion bushels, up 110 million bushels or 6 percent from 2000/01.

**Stocks and Storage.** September 1 corn stocks in all positions were reported at 1.9 billion bushels, up 11 percent from a year earlier and 55 percent above the 5-year average (table 7). September 1 stocks were reported up for all regions, with the Western Corn Belt recording a net absolute gain of 72 million bushels, bringing its total stocks to 801 million bushels. This is 10 percent above the previous year and 63 percent above the 5-year average. Fifty-eight percent of the Western Corn Belt stocks were in off-farm locations. Stocks were up in all States in the region, with Minnesota leading with a net gain of 32.4 million bushels. Approximately 59 percent of the region's corn crop was stored in Iowa, totaling 477.2 million bushels.

The Eastern Corn Belt stored 553 million bushels of corn, 64 percent of which was off farm. The Eastern Corn Belt stocks were 6 percent above the previous year and 50 percent above the 5-year average. Total stocks increased in all States in the region except Michigan, where stocks in all positions decreased by 8.1 million bushels. Illinois was responsible for having the largest share of Eastern Corn Belt stocks, accounting for 46 percent of the region's stocks. Illinois stored a total of 254.7 million bushels of corn on and off farms. This represents a gain of 19.5 millions bushels, compared to the previous year. Indiana, Ohio, and Wisconsin (figure 2) also recorded gains in the total amount of

**Figure 2--Corn production forecast**



corn stocks stored on and off farms. The Eastern and Western Corn Belts were responsible for 71 percent of all of the Nation's corn stocks, with the Western Corn Belt leading with 42 percent. In the Central Plains, 316 million bushels of corn were stored on and off farms. This is 8 percent above the previous year and 46 percent above the 5-year average. Seventy percent of these stocks were located in off-farm facilities.

**Table 7--U.S. corn stocks by position, September 1, 1995-2001**

Region	1995			1996			1997		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>			<i>million bushels</i>			<i>million bushels</i>		
Northeast	15	8	23	6	5	10	13	8	21
Southeast	9	17	25	3	9	12	9	14	23
Delta	0	1	1	0	0	0	0	3	3
Eastern Corn Belt	218	264	482	82	92	174	128	99	227
Western Corn Belt	321	378	699	62	73	135	181	169	350
Southern Plains	3	7	10	1	4	5	1	7	7
Central Plains	97	117	214	17	38	54	83	87	169
Northern Plains	51	15	66	11	4	14	39	17	56
Pacific Northwest	0	3	3	0	2	2	0	1	1
West	0	3	3	0	1	1	0	2	2
Unallocated	28	4	32	16	1	17	23	1	24
United States	741	817	1,558	197	229	426	475	408	883

Region	1998			1999			2000		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>			<i>million bushels</i>			<i>million bushels</i>		
Northeast	11	7	18	13	9	21	12	8	19
Southeast	11	21	32	7	20	27	7	19	26
Delta	0	11	11	0	4	4	0	1	1
Eastern Corn Belt	181	233	414	222	291	512	207	314	521
Western Corn Belt	273	224	497	327	413	740	363	366	729
Southern Plains	0	11	11	0	17	17	0	11	11
Central Plains	92	138	229	138	198	337	118	175	293
Northern Plains	44	15	59	66	25	91	62	21	83
Pacific Northwest	0	2	2	0	5	5	0	3	3
West	0	3	3	0	3	3	0	2	2
Unallocated	29	4	33	25	5	30	24	5	29
United States	640	668	1,308	797	990	1,787	793	925	1,718

Region	2001			Percent of 2000			Percent of 5-yr. avg.		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>								
Northeast	16	9	25	139	118	131	151	128	142
Southeast	8	20	28	107	107	107	105	121	116
Delta	0	6	6	0	611	611	0	150	150
Eastern Corn Belt	200	354	553	96	113	106	122	172	150
Western Corn Belt	337	464	801	93	127	110	140	186	163
Southern Plains	0	21	21	0	184	184	0	212	205
Central Plains	95	221	316	80	126	108	106	174	146
Northern Plains	67	35	102	108	168	123	151	215	168
Pacific Northwest	0	5	5	0	195	195	0	198	198
West	0	6	6	0	241	241	0	243	243
Unallocated	31	5	36	129	96	124	133	149	135
United States	753	1146	1899	95	124	111	130	178	155

Source: USDA-NASS

## Soybeans

**Supplies.** This year's soybean crop is projected at 2.91 billion bushels, up 149 million bushels or 5 percent from 2000/01 (table 8). With beginning stocks at 248 million bushels and imports at 3 million bushels, the total supplies for 2001/02 are projected at 3.16 billion bushels, up 106 million bushels or 3 percent above last year's level.

Soybean production is forecast up in all regions except the Northeast and Western Corn Belt. The Corn Belt regions account for 69 percent of the total soybean production, with the Eastern Corn Belt leading with 38 percent of the Nation's soybean output. Production is projected at 1.1 billion bushels in the Eastern Corn Belt. This is up 65 million bushels or 6 percent above 2000/01 and 14 percent above the 5-year average. Illinois and Indiana produced 70 percent of the region's soybean output, with Illinois accounting for 44 percent.

While the Western Corn Belt is projected to produce 31 percent of the Nation's soybean output, its production of 901 million bushels fell 32 million bushels or 3 percent below 2000/01. Production decreased by 34.2 million bushels (11 percent) in Minnesota from a year earlier. Output increased slightly by 6.27 million bushels to 482 million bushels in Iowa. Iowa is projected to produce 44 percent of the region's output.

**Use.** Total soybean use for 2001/02 is projected at 2.81 billion bushels, up 9 million bushels. The 2001/02 domestic crush is projected at 1.66 billion bushels, up 19 million bushels from 2000/01. Soybean exports are projected at 980 million bushels. Ending stocks (345 million bushels) are up 97 million bushels or 39 percent from last year.

**Table 8--U.S. soybean production, 1996/97-2001/02**

Region	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	Percent of 2000/01	Percent of 5-yr. avg.
	<i>million bushels</i>							
Northeast	41	40	44	38	56	52	93	119
Southeast	170	163	143	105	154	165	108	112
Delta	202	213	155	164	135	162	120	93
Eastern Corn Belt	839	965	1,014	959	1,031	1,096	106	114
Western Corn Belt	790	908	952	915	933	901	97	100
Southern Plains	14	21	12	17	11	12	108	81
Central Plains	209	231	240	262	224	299	134	128
Northern Plains	115	147	180	193	212	217	102	128
Other States <sup>1</sup>	n/a	n/a	n/a	n/a	1	1	n/a	n/a
United States	2,380	2,689	2,741	2,654	2,758	2,907	105	110

<sup>1</sup>Other States include: Florida and West Virginia.  
Source: USDA-NASS

**Stocks and Storage.** Soybeans stored in all positions on September 1 were recorded at 248 million bushels, down 40 million bushels or 15 percent lower than last year (table 9). On-farm stocks, at 84 million bushels, are 26 percent lower than last year and 6 percent below the 5-year average. Off-farm stocks totaled 164 million bushels, down 7 percent from a year ago and 16 percent above the 5-year average. The Eastern and Western Corn Belts accounted for 71 percent of the total soybeans stored in the Nation. The Western Corn Belt stored the largest amount of stocks on and off farms, 111 million bushels, representing 45 percent of the Nation's stocks. The Western Corn Belt has 63 percent of its stocks stored off farms. The Western Corn Belt stocks are 18 percent below last year's stocks and 7 percent above the 5-year average. While total stocks in Missouri increased slightly by 692,000 bushels, stocks off farm in Iowa and Minnesota decreased by 18.6 and 5.7 million bushels, respectively. However, Iowa stored 55 percent of the region's total stocks, amounting to 61.4 million bushels.

**Table 9--U.S. soybean stocks by position, September 1, 1995-2001**

Region	1995			1996			1997		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>			<i>million bushels</i>			<i>million bushels</i>		
Northeast	0	1	1	0	0	0	0	0	0
Southeast	4	7	11	1	5	6	1	2	3
Delta	1	9	10	0	8	8	0	5	5
Eastern Corn Belt	31	67	98	19	36	54	13	26	39
Western Corn Belt	47	104	151	30	49	79	20	36	55
Southern Plains	0	2	2	0	0	0	0	0	0
Central Plains	11	21	31	5	13	18	5	10	15
Northern Plains	9	5	13	3	2	5	4	2	6
Pacific Northwest	0	0	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0	0	0
Unallocated	3	14	18	2	10	12	1	7	8
United States	105	230	335	60	124	183	44	88	132

Region	1998			1999			2000		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>			<i>million bushels</i>			<i>million bushels</i>		
Northeast	0	0	0	0	1	1	0	1	1
Southeast	0	4	4	0	5	5	0	0	0
Delta	0	6	6	0	9	9	0	7	7
Eastern Corn Belt	22	32	54	39	53	92	31	44	76
Western Corn Belt	40	48	88	67	96	163	52	83	135
Southern Plains	0	0	0	0	0	0	0	1	1
Central Plains	7	16	22	10	23	33	10	22	32
Northern Plains	6	3	9	11	6	17	10	8	18
Pacific Northwest	0	0	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0	0	0
Unallocated	10	6	16	18	10	28	10	12	21
United States	84	115	200	145	203	348	113	178	290

Region	2001			Percent of 2000			Percent of 5-yr. avg.		
	On farms	Off farms	Total	On farms	Off farms	Total	On farms	Off farms	Total
	<i>million bushels</i>								
Northeast	0	1	1	0	61	61	0	91	91
Southeast	0	7	7	0	1,935	1,935	0	200	181
Delta	0	7	7	0	101	101	0	101	100
Eastern Corn Belt	21	43	64	68	97	85	86	113	102
Western Corn Belt	41	70	111	79	85	82	99	112	107
Southern Plains	0	1	1	0	128	128	0	219	219
Central Plains	5	18	23	49	83	72	66	110	97
Northern Plains	9	8	17	85	102	92	126	187	150
Pacific Northwest	0	0	0	0	0	0	0	0	0
West	0	0	0	0	0	0	0	0	0
Unallocated	8	10	18	82	86	84	96	110	104
United States	84	164	248	74	93	85	94	116	107

Source: USDA-NASS

Karla Martin (202) 720-8264 [karla.martin@usda.gov](mailto:karla.martin@usda.gov) and  
 Surajudeen Olowolayemo (202) 690-1328 [surajudeen.olowolayemo@usda.gov](mailto:surajudeen.olowolayemo@usda.gov)

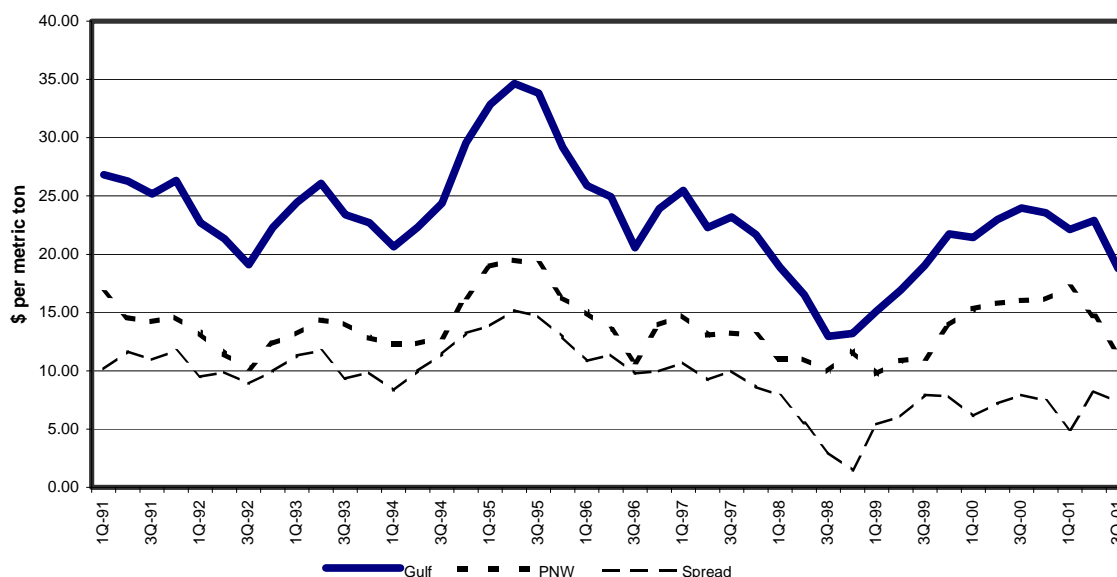
## Transportation Situation

### Ocean Freight

The cost of ocean freight transportation for the two key grain routes, the U.S. Gulf (Gulf) to Japan and the PNW to Japan, continued to fall through the third quarter of 2001 (figure 3). For the Gulf to Japan, the average ocean freight rate reached a low of \$17.73 per metric ton at the end of the third quarter, a drop of almost 22 percent in 3 months. For the PNW to Japan, the rate drop was also 22 percent for the same period.

Third quarter average ocean freight rates for both the Gulf and PNW to Japan were their lowest so far this year. For the third quarter of 2001, the average Gulf to Japan ocean freight rate was \$18.79 per metric ton (table 10), which was the lowest average in 10 years. This quarter's average rate for the Gulf to Japan (with the exception of 1998) was the lowest in more than 10 years. For the PNW to Japan, the average ocean freight rate of \$11.50 per metric ton (table 10) is also the lowest average in 10 years.

**Figure 3--Average ocean freight rates from U.S. ports to Japan, July 1999-July 2001**



Source: Baltic Exchange

The “spread” ocean freight rate, which is defined as the difference between the rates in the Gulf and the PNW to Japan, has experienced a drop in recent months. The \$7.29-per-metric-ton average ocean freight rate spread of 2001 (table 10) was the lowest for the third quarter in 3 years. This rate was also lower than the 5-, 10-, and 15-year averages.

As U.S. farmers began to harvest their crops this year, the demand for grain export through ocean transportation increased, but this increased demand may not be enough to support higher ocean freight rates in the near future. The falling ocean freight rates being observed this year are not limited to dry cargo markets in the Gulf and PNW to Japan. The rates for all ocean routes are weak due to an oversupply of vessel tonnage and sluggish demand. With the unrest in the Middle East overshadowing the market and minimizing the prospect of a recovery, the market for ocean transportation may get even softer in the short term.

**Table 10--Average daily ocean grain freight rates to Japan by quarter, 1997-2001**

Export range Year	1st quarter (Jan.-Mar.)	2d quarter (Apr.-June)	3d quarter (July-Sept.)	4th quarter (Oct.-Dec.)	Annual (Jan.-Dec.)
\$ / metric ton					
Gulf***					
1997	25.47	22.31	23.23	21.72	23.18
1998	18.95	16.85	13.41	13.65	15.72
1999	15.18	16.91	19.10	21.74	18.23
2000	21.45	22.97	23.97	23.57	22.99
2001	22.13	22.90	18.79	n/a	n/a
5-year average	21.39	20.79	20.06	20.89	20.78
10-year average	23.45	23.43	22.56	23.42	23.22
15-year average	22.51	21.95	20.93	22.54	21.98
Pacific Northwest**					
1997	14.72	13.09	13.25	13.06	13.53
1998	11.08	11.31	10.41	12.20	11.25
1999	9.74	10.88	11.07	13.91	11.40
2000	15.33	15.78	16.03	16.11	15.81
2001	17.15	14.67	11.50	n/a	n/a
5-year average	13.18	12.92	12.29	13.83	13.05
10-year average	13.81	13.64	13.17	14.12	13.69
15-year average	13.51	12.92	12.26	13.50	13.05
Spread <sup>1</sup>					
1997	10.75	9.22	9.98	8.66	9.65
1998	7.87	5.54	3.00	1.45	4.47
1999	5.44	6.03	8.03	7.83	6.83
2000	6.12	7.19	7.94	7.46	7.18
2001	4.98	8.23	7.29	n/a	n/a
5-year average	8.21	7.88	7.77	7.07	7.58
10-year average	9.64	9.79	9.39	9.30	9.53
15-year average	9.00	9.03	8.67	9.04	8.94

<sup>1</sup> Gulf minus Pacific Northwest

\*\*\*Route 2

\*\*Route 3

Source: Baltic Exchange

For the shipping industry, a bad situation has become worse. A deepening recession in the world economy, combined with the aftereffect of terrorist attacks in the United States, spells trouble for ocean carriers. The shipping industry is trying to cut costs, improve efficiency, and focus on moving the peak season cargo. However, the current economic slowdown is depressing trade growth and causing ocean freight rates to fall even more.

More than 10 newly built Panamax vessels are scheduled to enter service every month in the second half of this year and early next year, oversupplying the vessel market. Additional bulk shipping capacity will result in lower ocean-shipping rates to Asian countries in the short term. In a perfect market, carriers have the option of reducing capacity when times are hard through a variety of devices. They can slow steam, or they can lay up in various stages of readiness depending upon their anticipation of market recovery. They may even sell or scrap their ships. Regardless, some ocean carriers will not survive the fall in the ocean freight rates.

The only way to prevent rate reductions, according to London shipbrokers, is to remove the capacity (vessels) from the market, which means some brand new ships would be taken out of service. On the other hand, some shipping lines will scrap their vessels or join in vessel withdrawal programs. Such actions would bring the (vessels) supply closer to (vessels) demand in the short term, but their long-term effect is yet to be seen.

### ***Middle East***

In the aftermath of the September terrorist attacks on U.S. soil and possible conflict in the Middle East, London underwriters have added a war-risk surcharge for vessels calling at the ports of the Persian Gulf. In these cases, such as the Karachi and Muhammad bin Qasim Ports in Pakistan, the additional war-risk premium is about .4 percent of the ship's insured value. For a typical grain vessel, a Panamax ship with a 55,000-80,000-ton capacity, this means an additional \$100,000 charge for a 7-day port call. Beyond 7 days, the surcharge would be doubled.

Following the insurer's decision to raise premiums, shipping companies in the Middle East pressured their governments to find a solution that would save them from having to pay the added premium. For example, the Israeli cabinet approved a temporary arrangement to offer special insurance coverage to foreign flag ships up to 30 nautical miles from Israeli ports. The government of Dubai will also pay additional war-risk premiums for the vessels calling at Dubai ports, such as Port Rashid and Mina Jebel Ali.

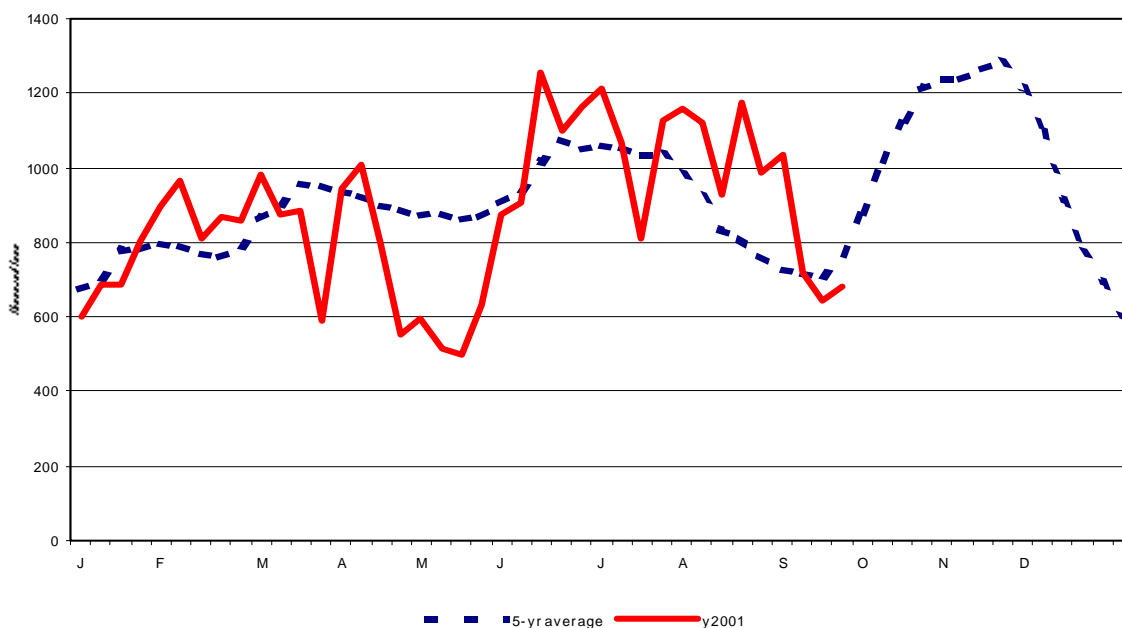
The Far Eastern Freight Conference, whose members account for almost 65 percent of trade between Europe and Asia, has advised its customers that a surcharge for transiting the Suez Canal would be applied to bills of lading from the beginning of October. Possible closure of the Suez Canal due to security concerns is driving up freight costs. The most damaging to trade and the shipping industry would be the actual closure of the canal. The waterway is a vital link between Asia and Europe, and if Egypt stops shipping traffic in the canal, even temporarily, the impact will be significant. Ships would have to make a detour around the African continent, adding some 7 days to their journey. The canal handles about 1,200 vessels per month.

Hooshang Fazel, (202) 690-4440 [Hooshang.fazel@usda.gov](mailto:Hooshang.fazel@usda.gov)

## Barge

In a typical year, barges on the upper Mississippi River (UMR) ship grain from mid-March to early December. This year, the 9-month UMR navigation season was slowed by high water levels in March and April and completely stopped by flood restrictions in late April through May. By the beginning of October, year-to-date grain shipments at Locks & Dam 27, the last lock on the Mississippi River, were 27.6 million tons, a decrease of 1.5 million tons, compared to the average year-to-date shipments. Accumulated year-to-date grain traffic on the Ohio River was reported at 5.8 million tons, a 1.5-million-ton increase over the average year-to-date traffic. Figure 4 shows that total weekly barge shipments were generally below average from mid-March through June and above average from June to September. While the severe spring floods did cause traffic disruptions on the UMR, annual grain barge shipments were near normal with additional traffic from the Ohio River.

**Figure 4--Weekly grain traffic at the upper Mississippi, Ohio, and Arkansas Rivers  
(2001 and 5-year averages)**



Source: U.S. Army Corps of Engineers

Barge grain movements for the third quarter 2001 were 973 thousand tons per week, a 10-percent increase over the average third quarter (table 11). Grain barge shipments are monitored by the U.S. Department of Agriculture (USDA) from weekly lock reports provided by the U.S. Army Corps of Engineers (Corps). The collective data from Mississippi River Locks 27, Ohio River Locks 52, and the Norrell Lock on the Arkansas River are considered to be the total volume of barged grain since each lock is the last or next to last one in its respective river. It should be noted that any grain originating on the Mississippi River below Locks 27 is not recorded by the USDA-Corps reporting system, which may result in an underestimation of total barge movements.

For the third quarter of 2001, Minneapolis-St. Paul to New Orleans barge freight rates were reported at 217 percent of tariff, which was about the same as the 5-year average (table 12). Barge rates are quoted in terms of differentials from

barge tariff benchmarks.<sup>1</sup> The tariff rate from Minneapolis-St. Paul is \$6.19 per ton; therefore, the spot market rate quoted is 2.17 times \$6.19 or \$13.43 per ton.

The UMR flooding caused barge companies to forgo shipments at the beginning of the navigation season when rates are typically high. With the end of the UMR barge season rapidly approaching, barge companies are unlikely to expect any rate increases to recoup revenues lost earlier in the season.

**Table 11--Average weekly grain barge shipments by quarter, 1996-2001**

Year	1st quarter (Jan.-Mar.)	2d quarter (Apr.-June)	3d quarter (July-Sept.)	4th quarter (Oct.-Dec.)	Annual (Jan.-Dec.)
<i>1,000 tons</i>					
1996	855	1,035	740	1,137	942
1997	753	785	803	1,145	871
1998	741	786	866	1,078	868
1999	831	1,081	1,040	1,039	998
2000	799	948	975	989	928
2001	784	834	973	-	-
5-yr. avg.	796	927	885	1,078	921

Note: All averages based on shipments through Mississippi L&D 27, Ohio L&D, and Norrel L&D on the Arkansas River through August 25, 2001.  
Source: U.S. Army Corps of Engineers

<sup>1</sup> The benchmarks are from the Bulk Grain and Grain Products Freight Tariff No. 7, which was issued by the Waterways Freight Bureau (WFB) of the Interstate Commerce Commission (ICC). In 1976, the U.S. Department of Justice entered into an agreement with the ICC and made Tariff No. 7 no longer applicable. Today, the WFB no longer exists, and the ICC has become the Surface Transportation Board of the U.S. Department of Transportation. However, the barge industry continues to use the benchmarks as rate units.

**Table 12--Average weekly barge rates by quarter, 1996-2001**

Region/year	1st quarter (Jan.-Mar.)	2d quarter (Apr.-June)	3d quarter (July-Sept.)	4th quarter (Oct.-Dec.)
	<i>percent of tariff</i>			
Minneapolis-St. Paul to New Orleans:	<i>tariff = \$6.19 per ton</i>			
1996	no rates	180	151	236
1997	165	146	179	249
1998	164	166	241	325
1999	213	182	271	269
2000	210	177	248	202
2001	no rates	no rates	221	
5-yr. avg.	190	171	217	256
St. Louis to New Orleans:	<i>tariff = \$3.99 per ton</i>			
1996	180.23	99.23	106.15	147.75
1997	118	90	122	140
1998	93.31	106.15	198.67	188.5
1999	123.15	107	196	163
2000	145	110	201	161
2001	166	124	159	
5-yr. avg.	132	102	164	158

Source: USDA-AMS

Nick Marathon (202) 690-0331 [nick.marathon@usda.gov](mailto:nick.marathon@usda.gov)

## Rail

Barring unforeseen circumstances, rail capacity for agricultural products will be adequate this fall and winter. The fall demand for rail transportation historically peaks in October. To date, U.S. railroads have been able to fill nearly all car orders either on time or within a few days. Although none of the railroads, with the exception of the Burlington Northern Santa Fe Railway (BNSF), report covered-hopper railcars in storage, most expect to begin placing railcars in storage during November. The availability of power and crews has also been adequate.

The September 11 terrorist attacks have had only limited and temporary effects upon rail operations in the United States. The fluidity of railroad operations in the United States, Canada, and Mexico has been normal since shortly after the attacks. The attacks, however, will result in longer term changes to rail security and the transportation of agricultural fertilizers and chemicals.

Although the conflict in the Middle East is not expected to result in major movements of troops and materials, defense movements have the potential to delay agricultural shipments or force a change in the choice of export ports—especially if the conflict increases in intensity and scope. In times of war, the Federal Government has the authority to preempt rail service. Should major defense movements or a preemption of rail service occur, it could affect the ability to move grain to market or to obtain agricultural inputs, such as fertilizer and chemicals.

Railroads are operating under heightened security conditions. The Association of American Railroads (AAR) has advised its members to: ensure that police forces employ heightened patrols, inspections, and surveillance to secure shipments and facilities; operate trains commensurate with security requirements; continue restricting information-system access; and encourage employees to maintain a high degree of awareness. AAR has established critical action teams to evaluate security needs and has activated a Rail Freight Industry Crisis Center, which is operating 24 hours a day, 7 days a week, to monitor developments and coordinate responses with the highest levels of national security agencies.

Railroad detectives and security personnel are watching rail yards closely for any suspicious activity. Extra security patrols, consisting either of the railroads' own security personnel or the National Guard, have been assigned to guard railroad tracks, major rail tunnels, and bridges. Furthermore, railroads are tightening security on their Web-based information systems, removing some data and severely restricting access to information dealing with movement and shipment of certain materials.

Class I railroads have been notified by their insurance companies that when their insurance policies are renewed, liability insurance premiums will be increased substantially and some coverage may be eliminated. In addition, heightened security measures will increase railroad costs. Thus, railroads may eventually increase some tariff rates and seek to increase rates as contracts are renegotiated. For those existing contracts having an escalation clause tied to railroad costs, contract rates may automatically increase. The removal of fuel surcharges, which probably will be eliminated by the end of October, will alleviate these possible rail rate increases.

Agricultural producers and those storing agricultural products may also be affected, either directly or indirectly, by increased security on the movement of hazardous materials. On October 7, all U.S., Canadian, and Mexican railroads restricted movements of hazardous chemical products for 3 days. Some of these products are used as fertilizers or grain fumigants or in the manufacture of fertilizer and pesticides. Although these restrictions have been lifted, the heightened security surrounding movements of hazardous materials will result in higher transportation costs, and there may be further restrictions to come.

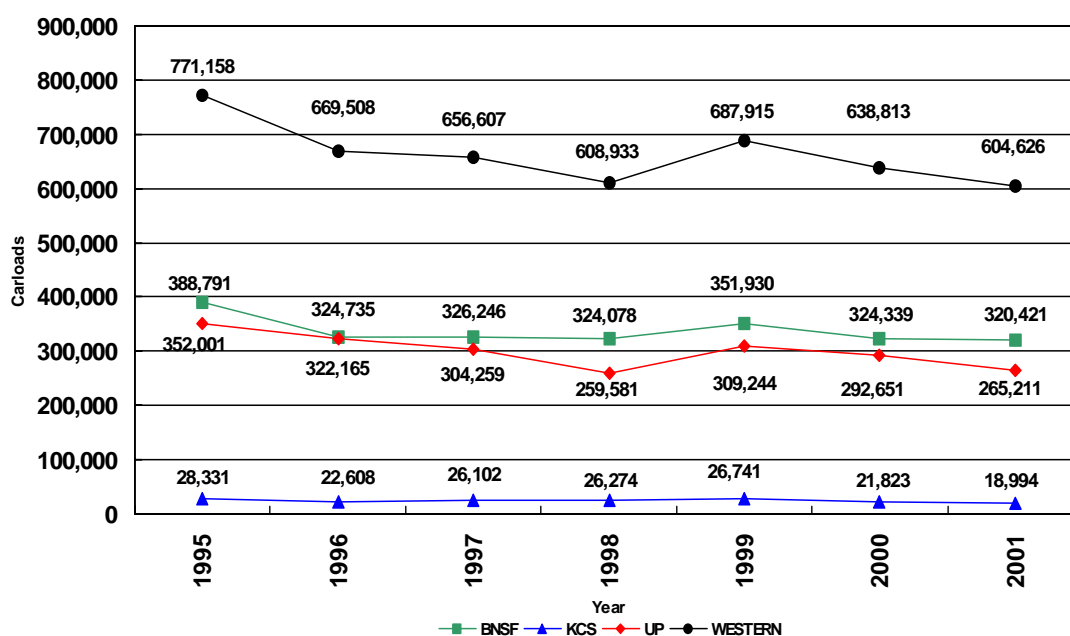
Although all government agencies have increased inspection activity, cross-border rail movements into the United States have experienced only minor delays because government agencies are cooperating with each other and the railroads. Rail shipments crossing the U.S.-Mexican border are preinspected and precleared, resulting in that border remaining fluid. Due to the need to increase security and better facilitate U.S.-Canadian trade, which amounted to \$450 billion last year, the United States and Canada may work toward coordinating customs activities and inspection procedures.

For the first 40 weeks of 2001 (through October 6), grain cars originated on U.S. Class I railroads decreased 2.7 percent, compared to the same period in 2000 (840,054, compared to 863,702), and decreased 3.5 percent from the 40-week average of the years 1996-2000.<sup>2</sup> For the most current 4-week period (weeks 37 through 40, which corresponds to the period of September 9 through October 6), grain cars originated by U.S. Class I railroads were 6.2 percent fewer than those originated during the same period in 2000 (89,240, versus 95,110). This was, however, 1.9 percent greater than the 1996-2000 average for the same 4-week period.

### Western Railroads

Demand for grain transportation on the western railroads was weak during the first 40 weeks of 2001 (through October 6). Only 604,626 grain cars were originated during this period in 2001, compared to 638,813 cars for the same period in 2000, a 5.4-percent decrease and a 7.3-percent decrease from the 1996-2000 average for the same period (figure 5). Grain cars loaded on the western railroads during the most recent 4 weeks of 2001 (weeks 37 through 40) decreased 5.4 percent as compared to the corresponding period in 2000 (67,349 carloads, compared to 71,172) but increased .8 percent when compared to the 1996-2000 average of the same 4-week periods (figure 6). Recent harvest delays have contributed to the weakness in demand for grain transportation during the last half of September and the first half of October.

**Figure 5--Western Class I railroad carloads of grain originated  
(first 40 weeks of the year, 1995-2001)**



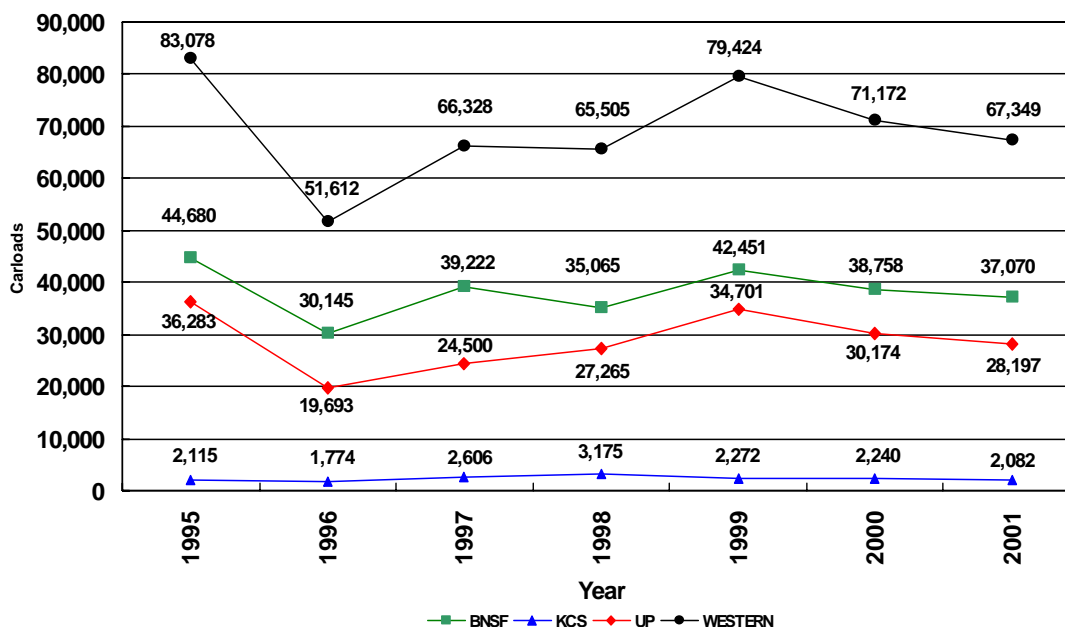
Source: Weekly Railroad Traffic, Association of America Railroads

Auction prices for guaranteed grain cars on the two major western railroads, BNSF and Union Pacific (UP), remain low. As of October 9, railcars in the secondary market for November 2001 were selling at average discounts of \$7 on BNSF and \$51 on UP; for December 2001, \$8 and \$51 discounts, respectively; and for January 2002, a \$5 premium and a \$35 discount, respectively.

<sup>2</sup> All traffic comparisons exclude Illinois Central, which, in the fourth quarter of 2000, began to report its cars originated as part of those originated by Canadian National.

Export movements of grain, with the exception of spring wheat out of the PNW, are reported to be slow. Soybean movements to processors and Mexico are reported to be strong.

**Figure 6--Western Class I railroad carloads of grain originated  
(weeks 37 through 40, 1995-2001)**



Source: Weekly Railroad Traffic, Association of America Railroads

**Burlington Northern Santa Fe Railway.** The number of grain cars loaded on BNSF decreased 1.2 percent during the first 40 weeks of 2001 as compared to the same period in 2000 (320,421 railcars, compared to 324,339) (figure 5). This is 3 percent less than the average of comparable periods from 1996 to 2000. For the most recent 4-week period, BNSF originated 4.4 percent fewer railcars of grain than during the comparable period of 2000 (37,070 railcars, compared to 38,758), but this was only .2 percent less than the average of comparable periods from 1996 to 2000 (figure 6).

BNSF reports a greater proportion of grain moving in its shuttle train programs and less in traditional unit-train and carload service. BNSF's Scoots program, which moves smaller shuttle trains to processors, has been used for soybeans, and will soon initiate the program for wheat and corn.

As of October 6, BNSF had 28,086 covered-hopper railcars in its active grain fleet, with the number in storage decreasing to only 55. Since the month of October is the traditional peak month for the movement of grain, BNSF does not expect a shortage of railcars. As of October 9, BNSF reported 7,627 past-due railcar orders that were an average of 6.6 days late. For the week ending October 6, BNSF reported an average grain fleet cycle time of 24.19 days. Since BNSF has purchased many locomotives over the past 4 years, it has adequate locomotive power.

Even though auction bids for guaranteed railcars have been low, the percentage of guaranteed railcars offered that were sold has been greater this fall than last fall; 86 percent of the guaranteed railcars offered for the month of September and 79 percent offered for the month of October were sold, compared with 49 percent and 55 percent, respectively, in 2000. Activity on guaranteed cars offered for November is also greater, 38 percent being sold by October 4, compared to less than 18 percent being sold by October 5, 2000.

All of BNSF's yards are relatively fluid. The simple average of the reported terminal dwell times remains stable, 26.4 hours in September (figure 7). BNSF's average train speed also remains stable; in September it was 24.7 miles per hour for all trains and 22.2 miles per hour for grain trains.

**Kansas City Southern Lines.** Grain originated on the Kansas City Southern Lines (KCS) during the first 40 weeks of 2001 was down 13 percent, compared to the same period in 2000 (18,994 railcars, compared to 21,823), and was down 23.1 percent from the average of comparable periods from 1996 to 2000 (figure 5). Grain originated during the past 4 weeks decreased 7.1 percent, compared to the same period in 2000 (2,082 railcars, compared to 2,240), and was 13.7 percent less than the average of comparable 4-week periods from 1996 to 2000 (figure 6).

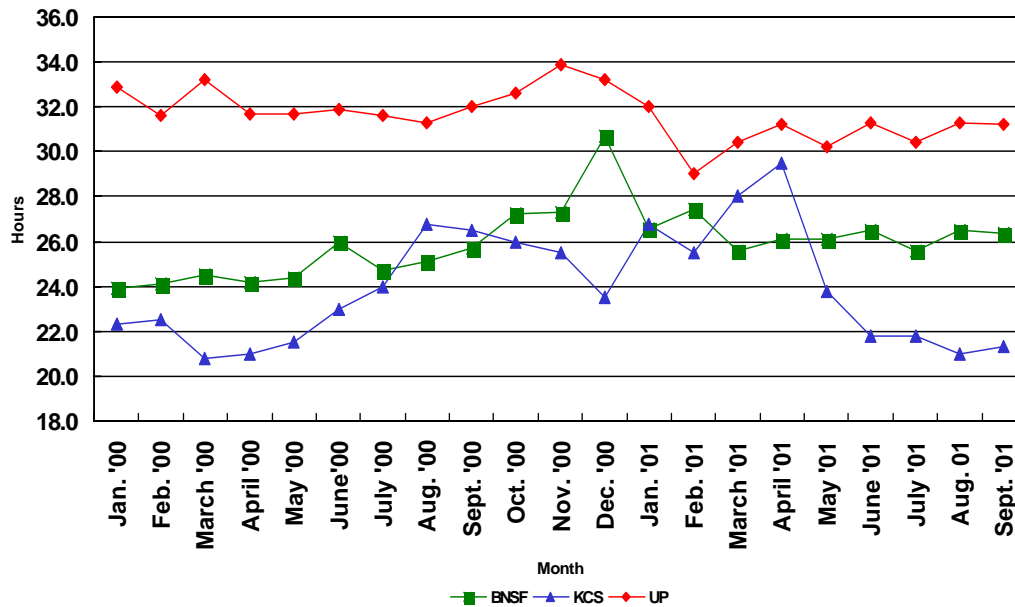
In September, the average speed for all trains on KCS was 26.7 miles per hour, and for grain trains, the average speed was 26.5 miles per hour. KCS's simple average of terminal dwell times was 21.3 hours in September, which is the lowest simple average of terminal dwell times for all U.S.-owned Class I railroads (figure 7).

**Union Pacific Railroad.** Grain movements on UP were down 9.4 percent for the first 40 weeks of 2001, compared to the same period in 2000 (265,211 railcars versus 292,651), and down 10.9 percent, compared to the average of the same periods from 1996 to 2000 (figure 5). Grain movements on UP for the last 4 weeks were down 6.6 percent from the same period last year (28,197, compared to 30,174) but increased 3.4 percent when compared to the average of the same periods from 1996 to 2000 (figure 6).

The UP system remains fluid, and grain car cycle times are very good. Although UP has reduced the size of its covered-hopper railcar fleet, it states that it generally has been able to place railcars on time because of better railcar cycle times. UP reports that it has no grain cars in storage at this time but will probably begin to place grain cars in storage during November. Due to the adequate availability of railcars, auction prices for guaranteed railcars have been weak. UP states that it has adequate locomotive power and crews.

UP reported an average speed for all trains of 24.5 miles per hour and 22.1 miles per hour for grain unit trains during September. The simple average of the terminal dwell times for September was 31.2 hours. UP's terminal dwell times are currently the longest of the U.S.-owned Class I railroads (figure 7).

**Figure 7--Western railroad average terminal dwell times <sup>1</sup>  
(January 2000-September 2001)**



<sup>1</sup> Simple average of all terminals.  
Source: Railroad Performance Measures, Association of American Railroads

### ***Eastern Railroads***

The eastern railroads continue to move more grain than before the split of Conrail. Grain cars originated on the eastern railroads for the first 40 weeks of 2001 increased 4.7 percent over those during the comparable period of 2000 (235,428 railcars, compared to 224,889) and increased 11.4 percent over the average originated on those lines for comparable periods from 1996 to 2000 (figure 8).<sup>3</sup> Grain traffic on the eastern railroads has been weak during the past 4 weeks. Grain traffic decreased 8.6 percent during the most recent 4 weeks of 2001 as compared to the same period in 2000 (21,891 railcars, compared to 23,938) but was still 7.7 percent greater than the average traffic during comparable periods from 1996 to 2000 (figure 9).

**CSX Transportation.** During the first 40 weeks of 2001, CSX grain carloadings were 5.7 percent greater than during the same period in 2000 (114,859 carloads, compared to 108,655) (figure 8). Grain carloadings on CSX during the past 4 weeks, however, decreased 13.6 percent, compared to the same period in 2000 (10,248 carloads, versus 11,856) (figure 9).

CSX states that export movement to the East Coast has been a little less than normal during the past 6 weeks. Demand for transportation of soybeans is reported to be brisk but slightly down. Movements of corn are down through mid-October due to a late harvest but are expected to recover by November. CSX expects decreased grain movements into North Carolina, South Carolina, and Kentucky due to increased yields in those States.

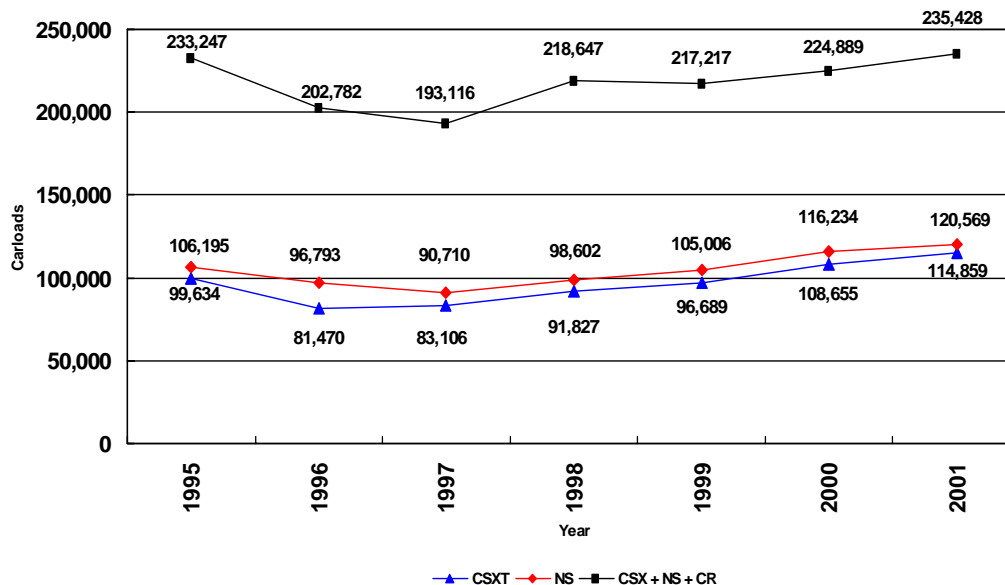
CSX reports that its supply of covered-hopper railcars (approximately 4,500 for grain service) has been adequate and that it has none in storage at this time. Currently, it is filling 95 percent of its grain orders on time. CSX also reports that the

<sup>3</sup> All traffic comparisons exclude Illinois Central, which, in the fourth quarter of 2000, began to report its cars originated as part of those originated by Canadian National. This leaves only the comparison of current rail traffic on CSX and NS to that of CSX, NS, and Conrail in the periods prior to the split of Conrail in June 1999.

availability of locomotive power and crews continues to be adequate. In addition, CSX reports good cycle times due in part to its emphasis on shuttle and unit trains.

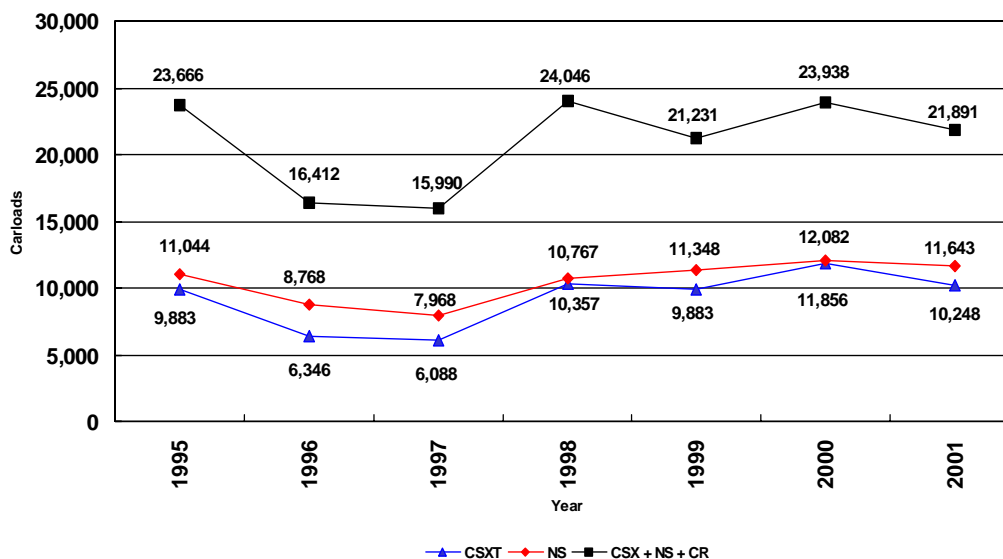
CSX reports that operations across its system are fluid. In September, CSX's average train speed for all trains was 22.1 miles per hour; it was 20.8 miles per hour for grain trains (figure 10). CSX's simple average of terminal dwell times for September 2001 was 28.5 hours (figure 11).

**Figure 8--Eastern Class I railroad carloads of grain originated  
(first 40 weeks of the year, 1995-2001)**



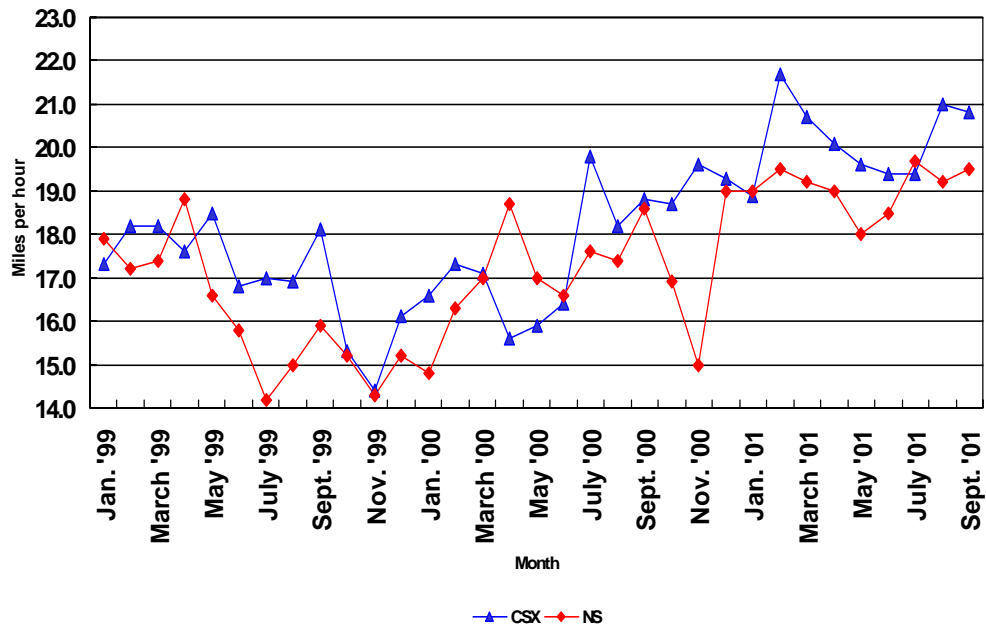
Source: Railroad Performance Measures, Association of American Railroads

**Figure 9--Eastern Class I railroad carloads of grain originated  
(weeks 37 through 40, 1995-2001)**



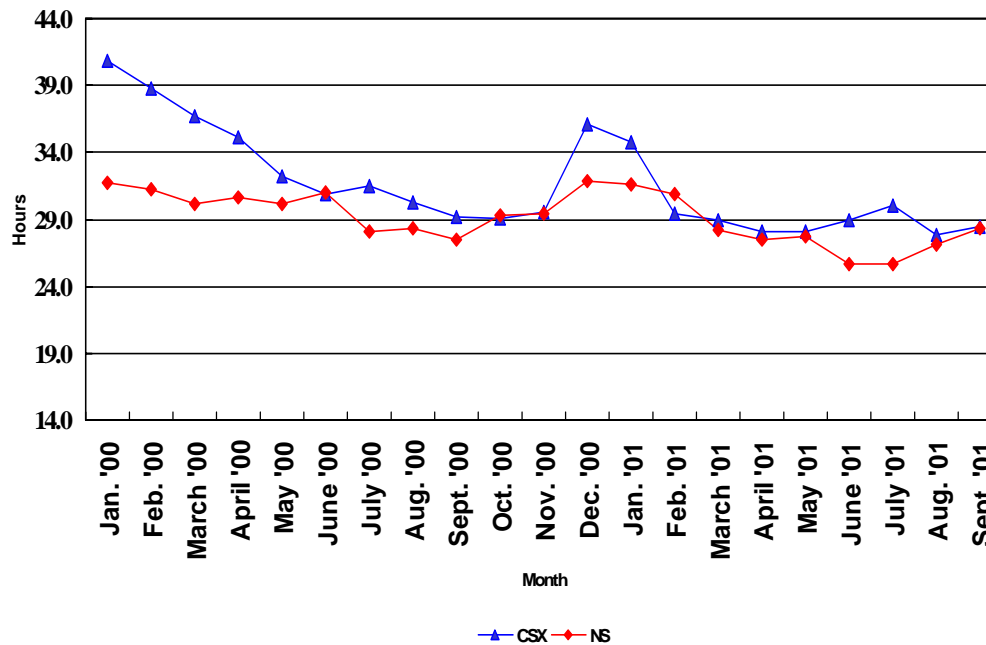
Source: Railroad Performance Measures, Association of American Railroads

**Figure 10--Eastern railroad average monthly grain train speeds  
(January 1999-September 2001)**



Source: Railroad Performance Measures, Association of American Railroads

**Figure 11--Eastern railroad average terminal dwell times<sup>1</sup>  
(January 2000-September 2001)**



<sup>1</sup> Simple average of all terminals.

Source: Railroad Performance Measures, Association of American Railroads

**Norfolk Southern.** Grain movements for the first 40 weeks of 2001 increased 3.7 percent on the Norfolk Southern Railroad (NS), compared to the comparable period in 2000 (120,569 carloads, versus 116,234) (figure 8). During the last 4 weeks, however, grain movements on NS have decreased 3.6 percent as compared to the same period in 2000 (11,643 railcars, compared to 12,082) (figure 9).

NS reports that corn and soybean movements to feedlots, particularly in the Southeast, are up over last year. However, NS reports that there has been little or no demand for the transportation of grain to poultry feeders in the Delaware-Maryland-Virginia region due to carryovers from last year's large crops and relatively good crops this year. NS expects to move grain from the Midwest to Pennsylvania after the first of the year. Movements of grain to processors have been about even, but movements of soybeans to processors have been down due to a late harvest.

Due to decreased unit-train cycle times and increased use of unit trains, grain car supply has been good. NS does not expect grain car shortages this fall and winter since it has cleaned some covered-hopper railcars, which were formerly used to haul fertilizer, to increase its grain hauling capacity. NS states that its locomotive fleet is adequate and that it has enough crews available to handle expected demand.

In September, NS's average train speed for all trains was 22.4 miles per hour; it was 19.5 miles per hour for grain unit trains (figure 10). NS's simple average of the terminal dwell times was 28.3 hours for September (figure 11).

Marvin Prater (202) 690.6290 [marvin.prater@usda.gov](mailto:marvin.prater@usda.gov)

## Motor Carrier

Motor carrier grain transportation has changed little in the wake of the September 11 terrorist attacks. The recent attacks should not substantially change ongoing grain haul capacities. Grain hauling prospects, on the other hand, are complicated by various uncertainties that depend upon fuel resources. These include slack demand for crude oil, the risk of supply losses in reaction to ongoing allied military actions, and the possible action of OPEC to trim production quotas in response to sustained low oil prices. Even with these uncertainties, motor carrier transporters should encounter relatively moderate fuel price levels this winter. Midwest grain haulers, however, may encounter higher prices, compared to the national average due to a tighter supply-demand balance in local fuel stocks.

**Fuel Supply.** In the wake of the terrorist attacks, OPEC promptly assured world oil markets that it would maintain its current levels of production to ease any fears of an inadequate supply. Before the terrorist attacks, the Organization of the Petroleum Exporting Countries (OPEC) was expected to initiate a price-band mechanism to keep its reference basket of crude oil within a range of \$22-\$28. The mechanism allows members to cut output by 500,000 barrels per day if the price falls below \$22 per barrel for 10 consecutive working days. At the time of publication, however, well beyond the 10-day period, the price has hovered near \$20 but has not triggered an OPEC production cut. OPEC's inaction points up the delicate nature of its position. An output cut, apart from being politically insensitive with the world economy facing recession, would arguably provide greater market share to producers outside of OPEC, such as Russia, Norway, and Mexico. As a result, production levels remain unchanged.

**Fuel Demand.** With fuel supplies seemingly adequate, the demand side of the market will push prices lower. This is primarily due to current economic conditions, which are not expected to provide a significant growth in demand for energy this winter.

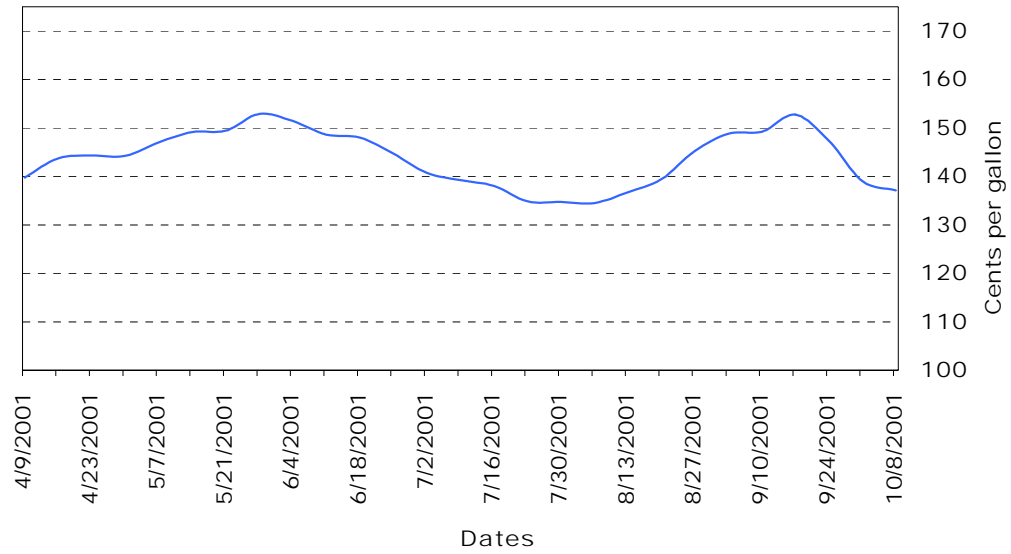
**Trade Prices.** The market trading price for imported crude oil, already lackluster prior to the terrorist attacks, averaged an estimated \$22 per barrel in September. This represented a decrease of approximately \$1.90 per barrel from August trade levels. Since the start of allied military operations on October 7, prices have remained steady at about \$20 per barrel for the OPEC basket of crude oil and about \$19-\$21 per barrel for the U.S. benchmark West Texas Intermediate crude oil.

## Fuel Prices

**Diesel.** Despite concerns about potential supply snags and scattered reports of price gouging after the September 11 attacks, the price of diesel has been relatively stable. Prices rose in September to \$1.49 per gallon, 9 cents per gallon above the August price (figure 12). However, this increase was not due to the terrorist attacks. Instead, it was the result of refinery shutdowns in the Midwest during August and September that reduced fuel supplies.

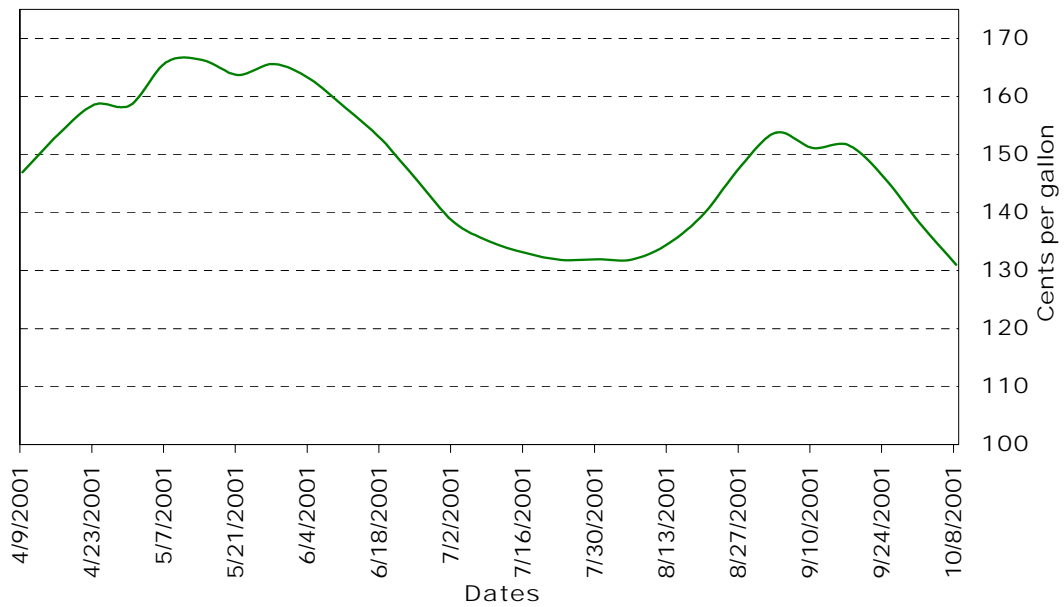
**Gasoline.** In the 3 weeks following the attacks, retail prices dropped an average of 11 cents per gallon, falling in every region of the country. The national average monthly price for gasoline hovered around \$1.52 per gallon in September, 10 cents per gallon higher than the August price (figure 13). Inventories have remained within the normal range despite moderate to strong midsummer gasoline demand. These lower gasoline price trends are expected to continue through the remainder of the harvest and winter seasons.

**Figure 12--“On-highway” retail diesel prices (4/9/01 to 10/8/01)**



\*Source: United States Department of Energy, Energy Information Agency at [eia.doe.gov](http://eia.doe.gov)

**Figure 13--National average gasoline prices (4/9/01 to 10/8/01)**



\*Source: United States Department of Energy, Energy Information Agency at [eia.doe.gov](http://eia.doe.gov)

## Midwest Prices

The Midwest represents the lone exception to lower fuel prices this winter. A tighter supply-demand balance in the Midwest may result in higher prices in this region, compared to the national average for distillate fuels over the next few months. In turn, grain hauling prospects in the Midwest for the remaining harvest and winter seasons may be affected.

The Midwest region relies in part upon modal fuel shipments from elsewhere in the United States to satisfy its transportation needs. Capacity of pipeline and barge shipping from other supply regions, particularly the Gulf Coast, are limited. The region, therefore, produces a large portion of its fuel locally. At least until more transportation capacity is available from other parts of the country, local refinery production will continue to be an important factor in petroleum product supply for this region and may influence prices.

Petroleum fuel demand in the Midwest has grown at relatively modest rates, compared to the Nation as a whole. According to the U.S. Department of Energy, annual growth in the Midwest for distillate fuel oil needs rose on average 2.1 percent over the past 5 years. Compared to other regions of the United States, distillate demand in the Midwest is greater on average due to agricultural consumption (over 8 percent above average), while home heating oil consumption is less (about 4 percent).

With this in mind, distillate fuel stocks and supply remain low in the Midwest. There are a number of local fuel refinery outages occurring at the peak fall and early winter harvest when Midwest fuel demand is seasonally higher, compared to the national average. A recent fire at a Citgo refinery facility in Lemont, IL, resulted in the shutdown of the entire plant. This is a loss of almost 5 percent of the operable capacity, and production will be disrupted for 6 months. Additionally, Premcor's Blue Island refinery, along with other production plants, had unexpected maintenance during the fall, resulting in additional constraints on distillate production. Table 13 shows the current loss in Midwest refinery capacity.

**Table 13--Midwest forecast refinery capacity loss (September to December 2001)**

	<b>Sept.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>
<b>Operable refinery capacity</b>	3,557	3,557	3,557	3,557
<b>Unavailable capacity due to outages</b>	172	335	297	163
<b>Percent unavailable</b>	5%	9%	8%	5%

Source: Department of Energy Information Administration\*

\*Operable capacity excludes Premcor's Blue Island refinery and includes Citgo's Lemont refinery. Unavailable capacity includes the loss of the Lemont refinery capacity.

As of October 26, primary inventories of Midwest distillate held at 27.1 million barrels; approximately 2.3 million barrels or 6.5 percent lower than last year's total of 29.4 million barrels, but stocks remain their lowest for this time of year in more than 20 years.

On a national and regional scale, low inventory levels tend to contribute to price surges. It is no different in the Midwest. The low distillate inventories entering the Midwest's peak demand period leave little cushion against sporadic market behavior and fuel price spikes. These conditions will keep depleted oil stock inventories from recovering to near normal or historic seasonal average levels. In conclusion, prices may push higher, compared to the national average and historic averages for this region. Other regions should find moderate fuel prices this winter.

James Del Cielo (202) 720-1378 [james.delciello@usda.gov](mailto:james.delciello@usda.gov)

### **Additional Sources of Information:**

More detailed information on grain and oilseed production and stocks is available from the National Agricultural Statistics Service in:

Crop Production,

<http://jan.mannlib.cornell.edu/reports/nassr/field/pcp-bb>

Grain Stocks,

<http://jan.mannlib.cornell.edu/reports/nassr/field/pcp-bb>

Small Grains Summary,

<http://jan.mannlib.cornell.edu/reports/nassr/field/pcp-bbs>

More detailed information on grain and oilseed supplies and use is available from the Economic Research Service in:

Feed Outlook,

<http://usda.mannlib.cornell.edu/reports/ersor/field/fds-bb>

Wheat Outlook,

<http://usda.mannlib.cornell.edu/reports/ersor/field/ocs-bb>

Oil Crops Outlook,

<http://usda.mannlib.cornell.edu/reports/ersor/field/ocs-bb>

The latest and most detailed grain and oilseed supply and demand information is available from the World Agricultural Outlook Board at:

<http://www.usda.gov/oc/waob/wasde/wasde.htm>

For additional information on grain, rail, and ocean freight transportation see:

USDA-AMS, *Grain Transportation Report*,

<http://www.ams.usda.gov/tmd/grain.htm>

U.S. Surface Transportation Board,

<http://www.stb.dot.gov>

Association of American Railroads,

<http://www.aar.org>

CSX Transportation,

<http://www.csx.com>

Kansas City Southern,

<http://www.kcsi.com>

Norfolk Southern,

<http://www.nscorp.com>

Union Pacific,

<http://www.up.com>

American Shippers,

<http://www.americanshipper.com>